

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. **(Previously Amended)** A method of making a preform for an enhanced photosensitive fiber comprising the steps of:  
    depositing successive layers of optical material the inside a tube using modified chemical vapor deposition; and  
    collapsing the successive layers of optical material in a reducing atmosphere with a positive pressure, wherein the positive pressure is 0 to 1.0 torr.
2. **(Canceled)**
3. **(Previously Amended)** A method according to claim 1 , wherein the positive pressure is 0 to 0.5 torr.
4. **(Original)** A method according to claim 3, wherein the positive pressure is 0.2 to 0.4 torr.
5. **(Original)** A method according to claim 1, wherein the reducing atmosphere comprises  $\text{GeCl}_4$ .
6. **(Original)** A method according to claim 5, wherein the reducing atmosphere further comprises at least one of He, Ar, CO, COH and 2-propanol.
7. **(Original)** A method according to claim 1, wherein the optical material is doped with Ge.

8. **(Original)** A method according to claim 7, wherein the optical material is co-doped with boron.
9. **(Previously Amended)** A method of making an enhanced photosensitive fiber comprising the steps of:
- making a preform using modified chemical vapor deposition wherein the preform is collapsed in a reducing atmosphere with a positive pressure, wherein the positive pressure is 0 to 1.0 torr; and
  - drawing the preform into a fiber.
10. **(Canceled)**
11. **(Previously Amended)** A method according to claim 9, wherein the positive pressure is 0 to 0.5 torr.
12. **(Original)** A method according to claim 11, wherein the positive pressure is 0.2 to 0.4 torr.
13. **(Original)** A method according to claim 9, wherein the step of drawing is conducted with a tension of 100 g to 250 g.
14. **(Original)** A method according to claim 13, wherein the step of drawing is conducted with a tension of 150 g to 200 g.
15. **(Original)** A method according to claim 14, wherein the step of drawing is conducted at a temperature of 1950 C to 2100 C.
16. **(Original)** A method according to claim 15, wherein the step of drawing is conducted at a temperature of 1980 C to 2050 C.

17. **(Currently amended)** A method of making a fiber grating comprising the steps of:  
~~providing an enhanced photosensitive fiber made according to claim 9~~  
making a preform using modified chemical vapor deposition wherein the preform  
is collapsed in a reducing atmosphere with a positive pressure, wherein the positive  
pressure is 0 to 1.0 torr;  
drawing the preform into a fiber; and  
exposing the enhanced photosensitive fiber to ultraviolet light to form a grating pattern.
18. **(Original)** The method of claim 17, wherein the step of exposing is completed within 15 minutes.
19. **(Original)** The method of claim 18, wherein the step of exposing is completed within 5 minutes.
20. **(Original)** The method of claim 19, wherein the step of exposing is completed within 1 minute.
21. **(Original)** The method of claim 20, wherein the step of exposing is completed within half a minute.
22. **(Original)** The method of claim 17, wherein the grating pattern forms a fiber Bragg grating.
23. **(Original)** The method of claim 17, wherein the grating pattern forms a long period fiber grating.

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24. **(Original)** The method of claim 17, wherein the grating pattern forms a laser stabilization grating.

### **REMARKS/ARGUMENTS**

In view of the above amendments and the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

Claims 1, 3-9, and 11-24 remain in this application. Claims 1, 3-9, and 11-16 have been allowed. Claim 17 has been amended. Claims 2 and 10 have been canceled in a previous Response. No new claims have been added

**Claims 17-24 stand under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Irven et al (U.S. Patent No. 4,165,224) in view of Matsumura et al (U.S. Patent No. 4,426,129), and further in view of Fanucci et al. (US Patent No. 4,465,708), Campion et al (US Patent No. 6,201,917), Ohga et al. (US Patent No. 5,763,081) or Atkins et al. (US Patent No. 5,745,615).**

The examiner, in responding to applicants comments (filed 8-11-03) explained that claim 17 did not explicitly require any steps for making the fiber, but instead “requires a structure that can be made by the process of claim 9-it does not require the process itself.” Thus, claim 17 and its dependent claims (18-24) were not held to be allowable, even though the claim 17 depended from claim 9, which was held to be allowable.

Therefore, applicants amended claim 17 to make it more clear that the steps of claim 9 should be included in the method of making the grating. More specifically, applicants amended claim 17 to explicitly include all the steps recited in claim 9. Since claim 9 was held to be allowable, claim 17 should now also be allowable.

Claims 18-24 depend from claim 17 as their base claims and, therefore, incorporate the language of claim 17. Therefore, claims 18-24 should also be allowable.

Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and

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patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Applicant believes that no extension of time is necessary to make this Reply timely. Should applicant be in error, applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Svetlana Z. Short at 607-974-0412.

Respectfully submitted,

DATE: 10/2/03

  
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